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WARNING – HIGH VOLTAGES

Power Supply Unit (PSU) work should only be carried out by qualified personnel.

We recommend that you use an approved Allen & Heath service centre for all power supply work.

Please contact your local Allen & Heath distributor for more details.

http://www.allen-heath.com/

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XONE:S6

SERVICE INFORMATION

Publication AP6297

Introduction

This publication provides technical information on servicing the Allen & Heath **Xone:S6** rotary club mixer. Included are internal layout drawings, block diagrams and circuit schematics with board layouts. Also included is technical information on the **Xone:V6** EQ Isolator and Crossfader modules, which are compatible with the **Xone:S6**. Please note that the valve circuits from the **Xone:V6** are not compatible with the **S6** and fitting of these parts should not be attempted. The **Xone:S6 MPS7** power supply unit should be used only to power a **Xone:S6** console.

Whilst we believe this information to be reliable we do not assume responsibility for inaccuracies. We also reserve the right to make changes in the interest of further product development.

Additional Resources

Allen & Heath web site	www.allen-heath.com	Product information Technical downloads Distribution contacts Company contacts
Technical support	support@allen-heath.com	See web for local contact
Xone:S6 user guide	AP6296	Operating instructions Performance specification User jumper link options Meter bulb replacement
Xone:V6 options user guide	AP5377	Operating instructions
		Performance specification

Xone:S6 Service Information

Issue status: xones6_ap6297_1.doc

Print date: 14 June 2005

ALLEN&HEATH
Manufactured in the United Kingdom by Allen & Heath

Kernick Industrial Estate, Penryn, Cornwall, TR10 9LU, UK

http://www.allen-heath.com

Servicing Precautions – General Notes

Service personnel: Service work should be carried out by technically qualified service personnel only. Mains power is dangerous and can kill. Do not attempt to work on a linear or switched mode power supply if you are not suitably qualified to do so. Do not attempt to repair surface mount circuit assemblies unless you are suitably qualified and have the necessary facilities to do so. Replacement circuit assemblies can be ordered.

Service facilities: Ensure a suitably sized work surface is available. Ensure this is clear of dirt, debris and obstructions which may damage the equipment surfaces. Ensure adequate lighting. Use the correct tools for the job and ensure they are in good working order. Ensure all workshop safety requirements are adhered to.

Service information: Check that you have all the information you need before starting the service job. Refer to the Allen & Heath web site or contact Allen & Heath technical support for details on the latest information. Full technical information can be downloaded from the web site Distributor Zone (password required).

Mains power: Connect the equipment to mains power only of the type described in the user guide and marked on the rear panel. The power source must provide a good ground connection. Ensure you always use an isolation transformer when working on any mains power supply unit.

Mains cord and fuse: Use the correct power cord as supplied with the equipment. Do not remove or tamper with the ground connection in the power cord. Heed the Important Mains Plug Wiring Instructions printed in the user guide if it is necessary to rewire the mains cord. Always replace the equipment mains fuse with the correct type and rating as described in the user guide and marked on the equipment panel.

Opening the unit: Switch off and remove the mains power cord before opening the equipment. Ensure all power supply covers and safety shields are in place before applying power with the unit open for diagnostic fault finding.

Closing the unit: Before finishing, check the quality and accuracy of the service work carried out. Remove any dirt or debris as this may cause equipment failure in the future. Ensure all assemblies, harnesses and connectors are correctly aligned and plugged in. Ensure that jumper settings and control configurations are correctly set according to the requirements of the customer.

Testing the unit: Before operating the equipment, read and adhere to the Important Safety Instructions printed in the user guide. Test that the service work has been successfully carried out.

Shipping the unit: Use adequate packing such as the original packaging or purpose designed flight case if you need to ship the unit. To avoid injury to yourself or damage to the equipment take care when lifting, moving or carrying the equipment.

Servicing Notes – Xone:S6

User maintenance: There are several user configurable jumper links inside. These are described in the user guide together with instructions on how to change the default settings.

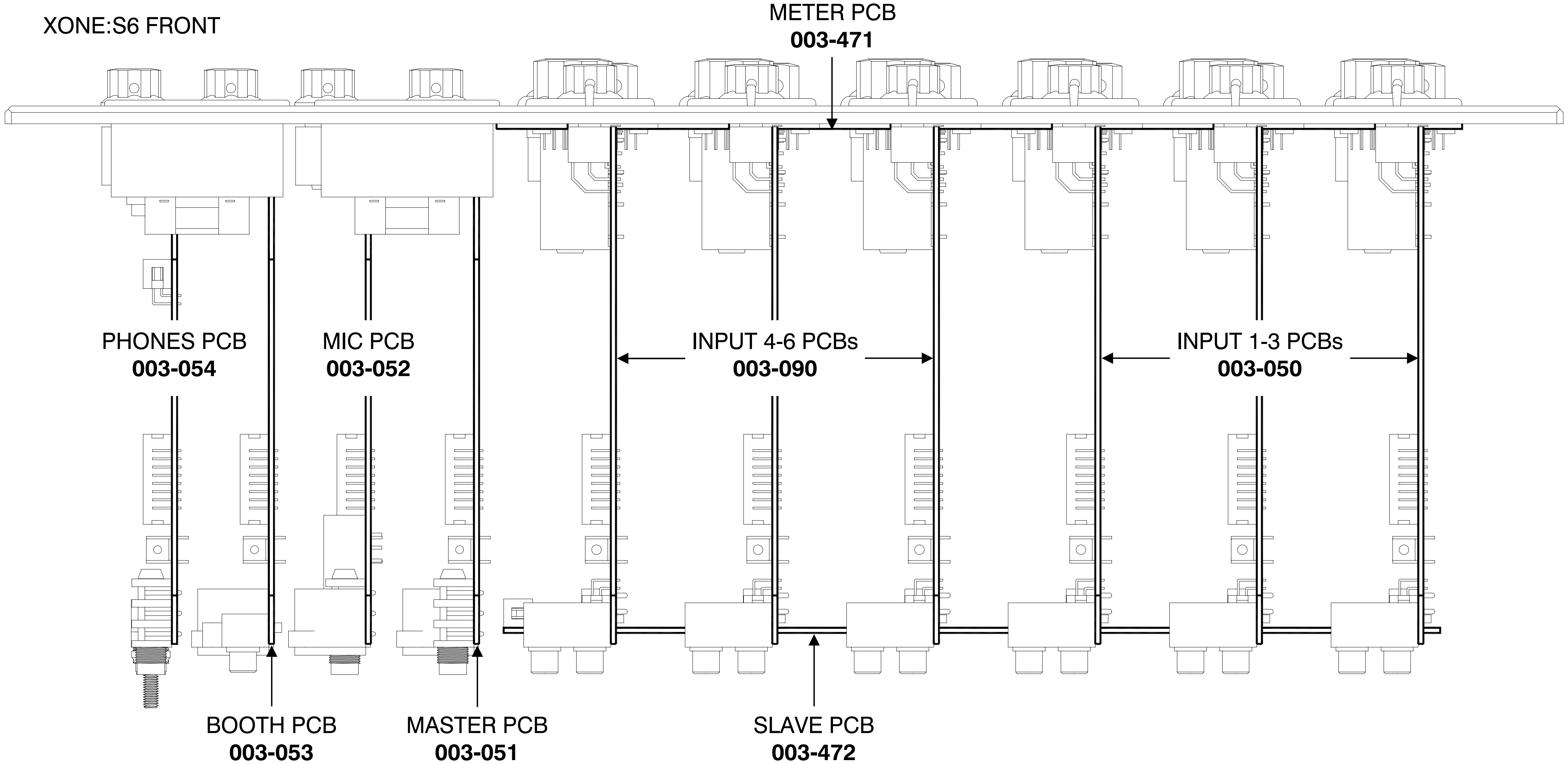
Technology: The **Xone:S6** uses conventional thru-hole PCB technology with high grade discrete transistor audio circuits. It has an external linear power supply which should be serviced only by suitably qualified personnel.

Operation: The **Xone:S6** is an audiophile rotary club mixer. To ensure optimum performance and reliability it should be connected and operated as described in the user guide.

Fault finding: Refer to the system block diagram and circuit drawings to follow through the signal path during fault diagnosis. Replace suspected faulty components only with those specified by Allen & Heath. The use of lower grade alternatives may degrade the performance. Ensure the RCA phono insert jumper links are pressed fully in if fitted. If a fault with the power unit is found, make sure it has been positioned according to the instructions in the user guide when installed. VU meter bulb replacement is described in the user guide.

Contents Log

XONE:S6 Internal Layout

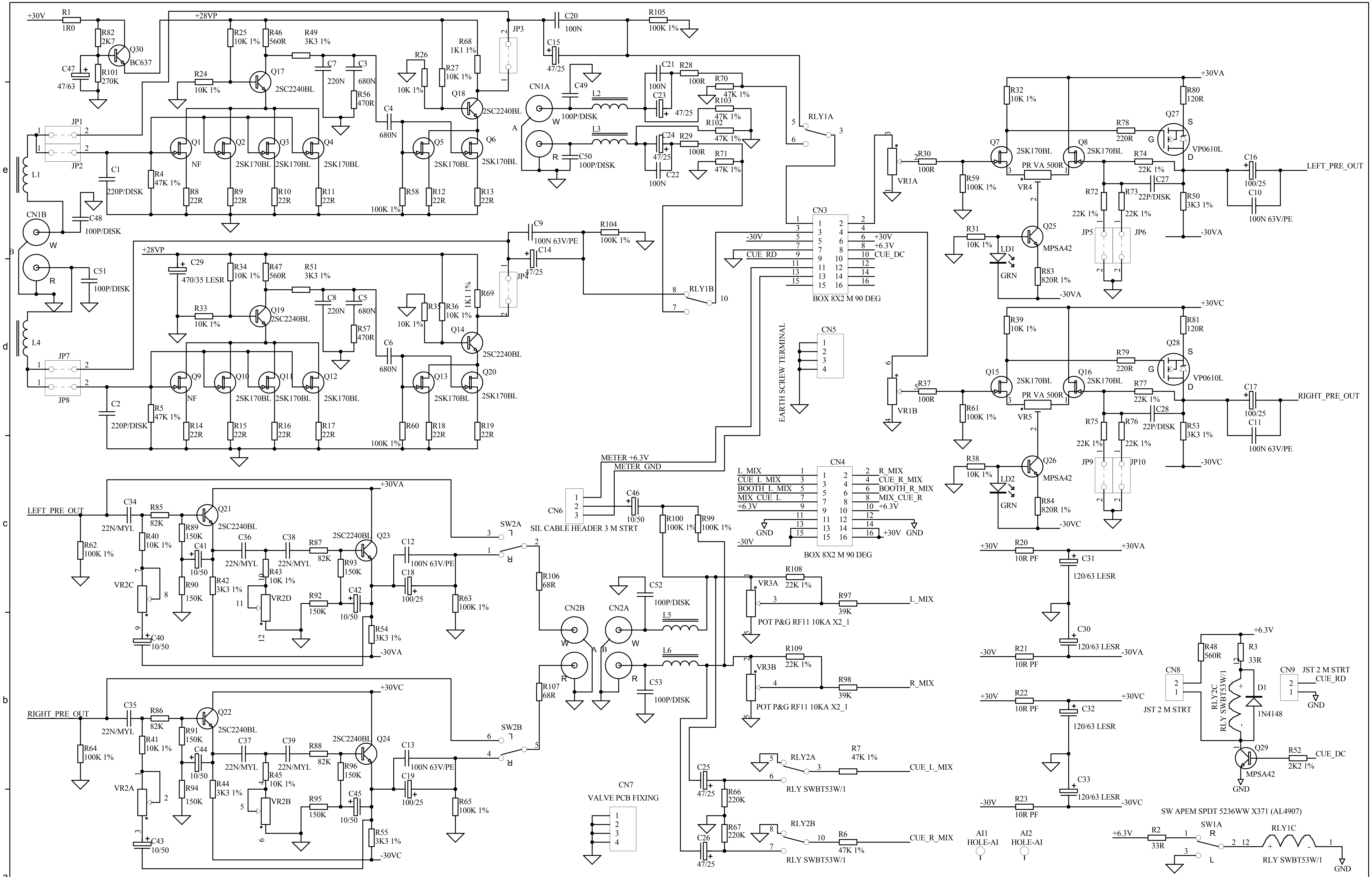


Product XONE:S6

Power Supply Versions MPS7-100
....MPS7-120
....MPS7-220
....MPS7-240

DC Cable Assembly 002-583
Pack Assembly......................... 003-465
Main Assembly 003-466
Panel Assembly Front 003-467
Chassis Assembly 003-468
PSU Assembly 003-469
Cue Switch Cable Assembly 003-089
Fader Assembly 003-109
VU Meter Assembly.................. 003-110

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Input 4-6 PCB........................... 003-090
Master PCB 003-051
Mic PCB 003-052
Booth PCB................................ 003-053
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Meter PCB................................ 003-471
Slave PCB 003-472
Power PCB............................... 003-470



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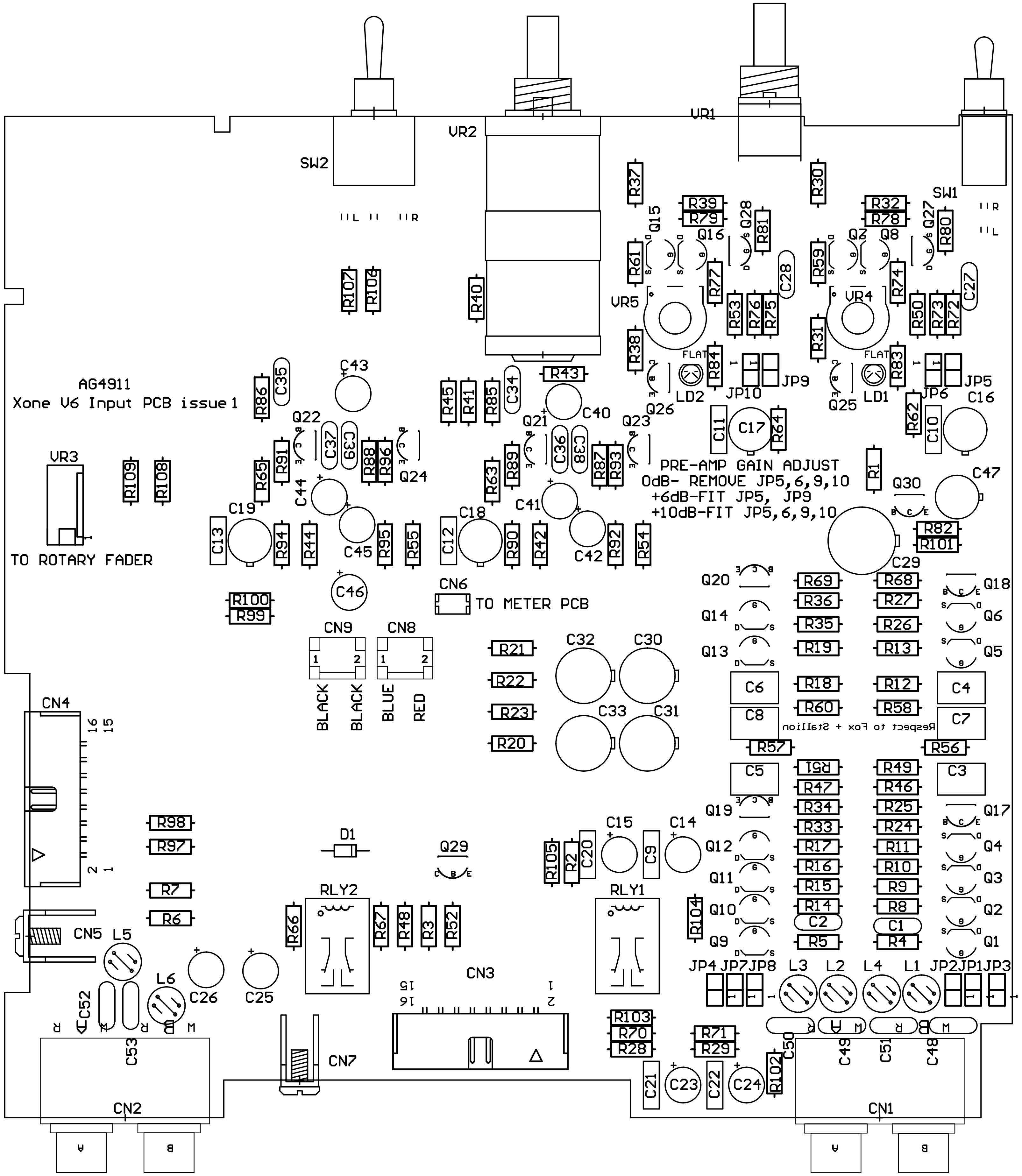
BRKT VR1C BRKT SW1B BRKT SW2C
POT9 10KA X2
SW APEM DPDT 5246W X371 (AL4906)
SW APEM SPDT 5236WW X371 (AL4907)

FILE: AG4911_1.1 INPUT.Sch PRINTED: 15:45:06 23-Sep-2004

TITLE: XONE S6 INPUT PCB
PAGE:
DRG No: C 4911 ISSUE: 1.1 SHEET: 1 OF 1

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003-050_090 iss.1.1



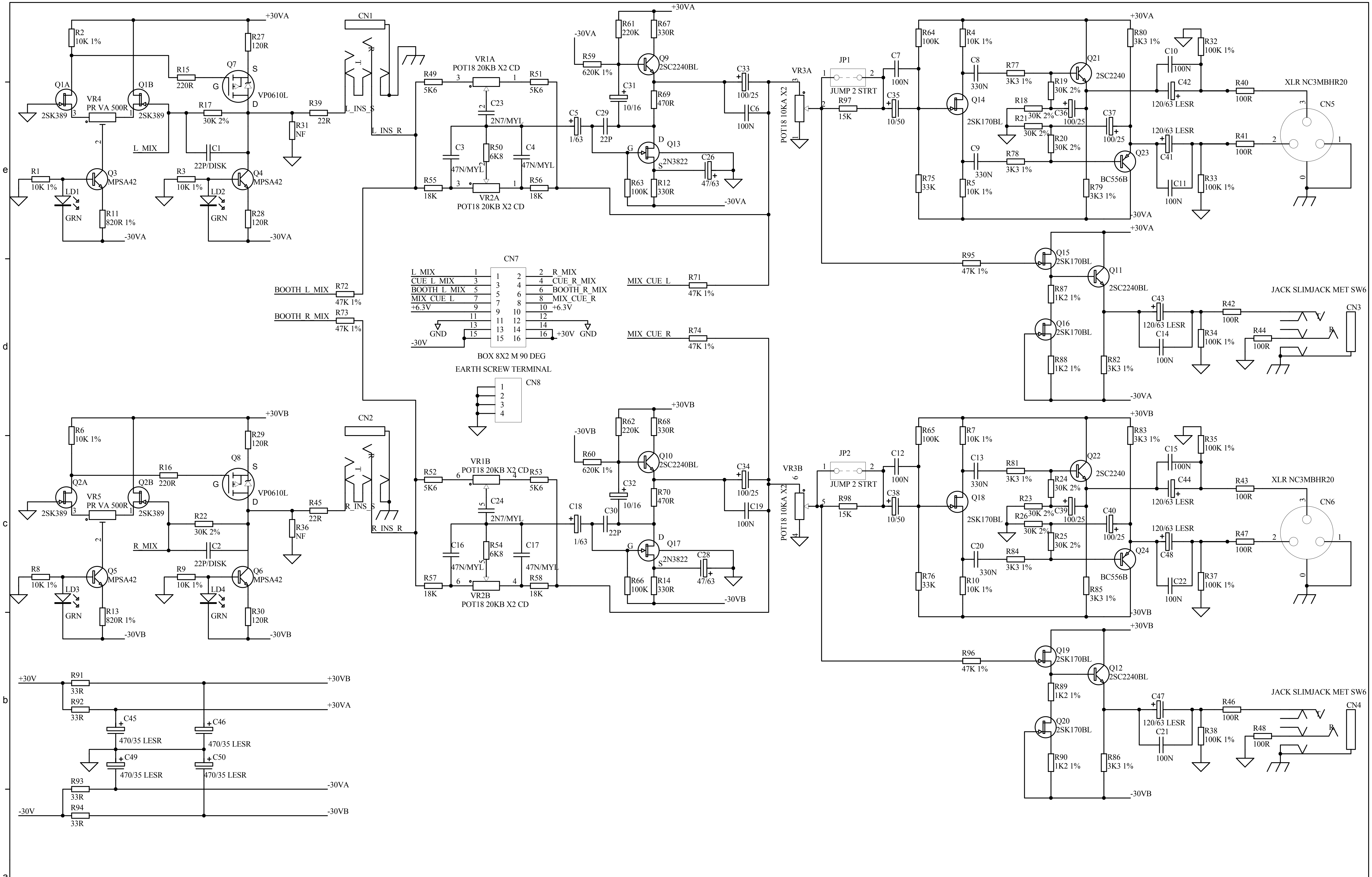
RIAA disable

CH1-3. For RIAA gain and equalisation JP2, JP3, JP4 and JP8 are fitted. This is the factory default setting. To disable RIAA and use these inputs with line sources, remove those jumpers and fit JP1 and JP7 instead.

Gain setting

CH1-6. The maximum preamp gain available is set using these jumpers. For +10dB gain all four jumpers JP5, JP6, JP9 and JP10 are fitted. This is the factory default setting. To change this to +6dB gain fit JP5 and JP9 only. For 0dB gain remove all four jumpers.

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1	ARJ	2-09-02
2	ARJ	31-10-02

AI1 HOLE-AI — AI2 HOLE-AI

FILE: AG4912 iss 2 Master.Sch — PRINTED: 13:58:36 23-Sep-2004

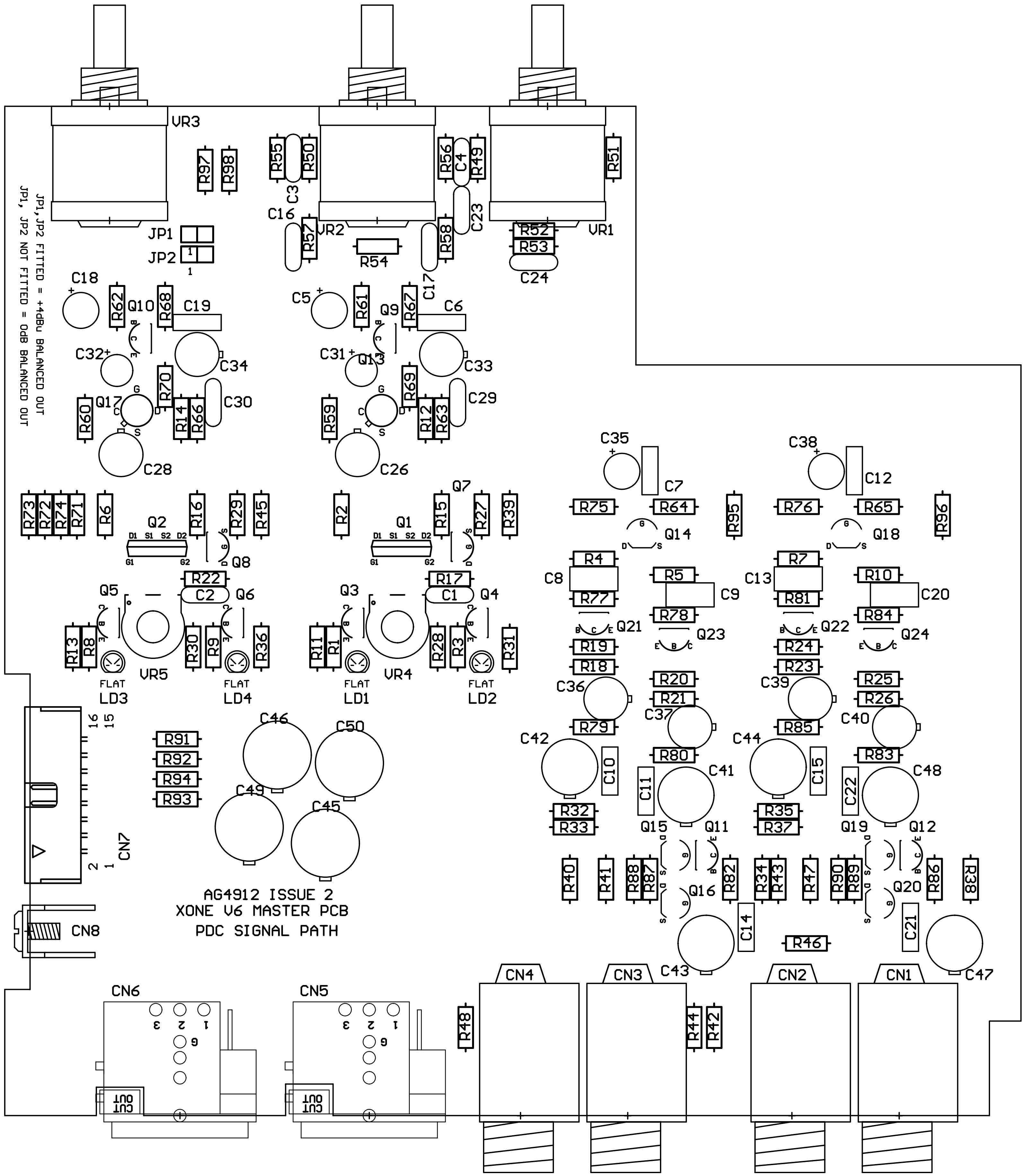
TITLE: XONE S6 MASTER PCB

PAGE:

DRG No: C4912 ISSUE: 2 SHEET: 1 OF 1

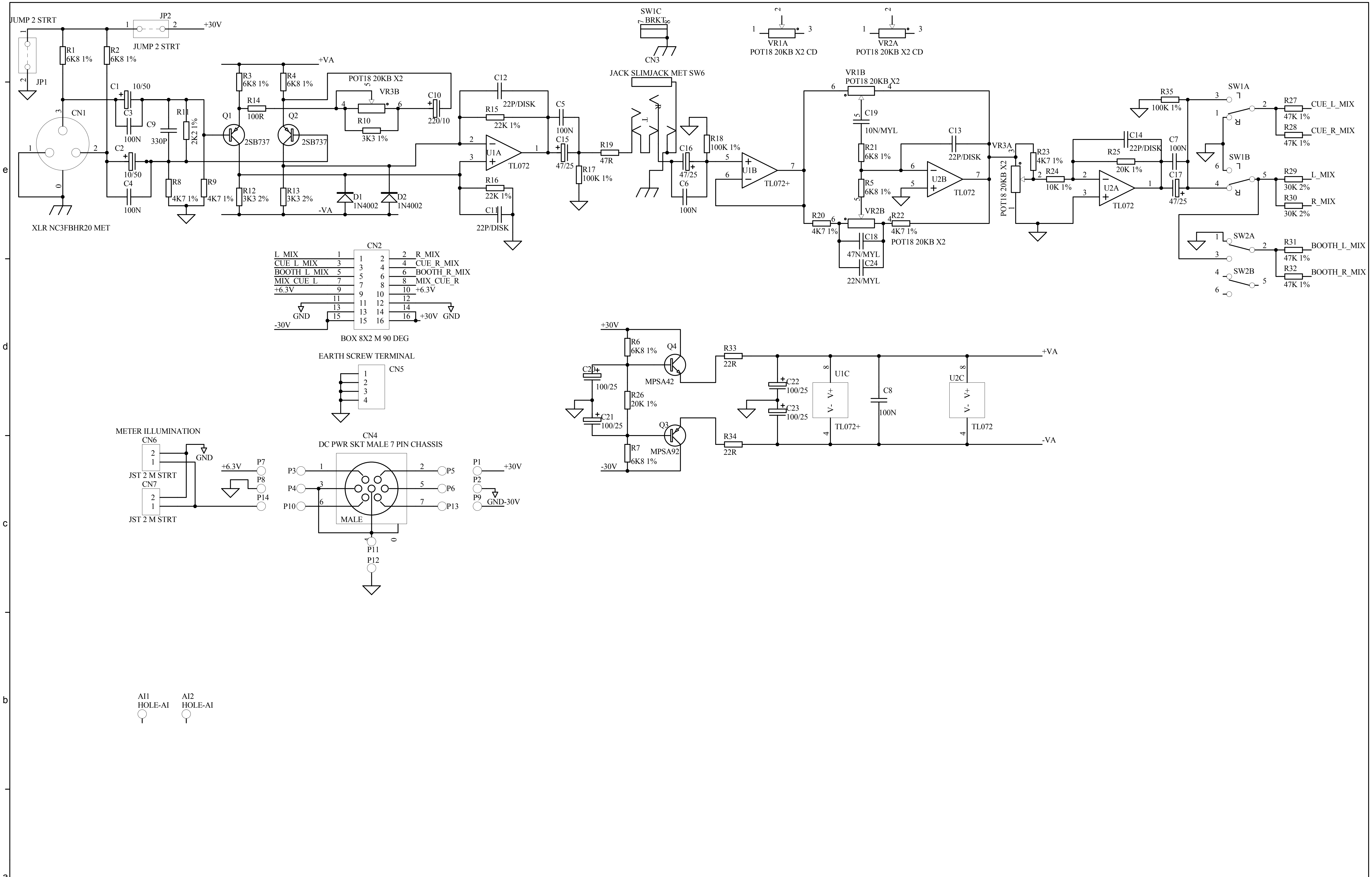
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003-052 iss.2



Master output level

The output level with MASTER control at maximum position and VU meters reading '0' is +4dBu with JP1 and JP2 fitted. This is the default factory setting. To change this to 0dBu remove JP1 and JP2. Access these jumpers from below the console.



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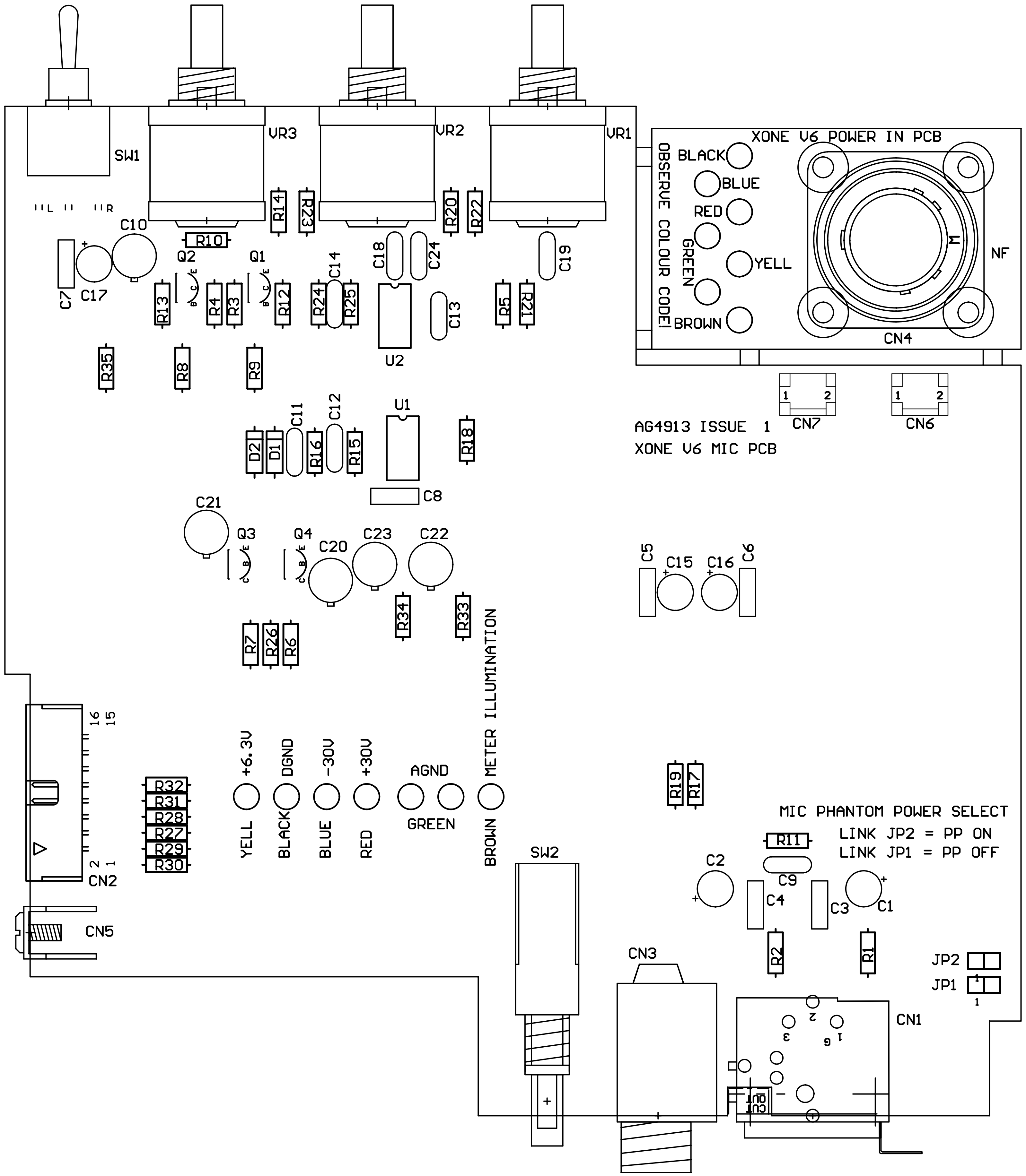
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1.1	ARJ	14-05-03

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TITLE: XONE S6 MIC PCB
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DRG No: C4913 ISSUE: 1.1 SHEET: 1 OF 1

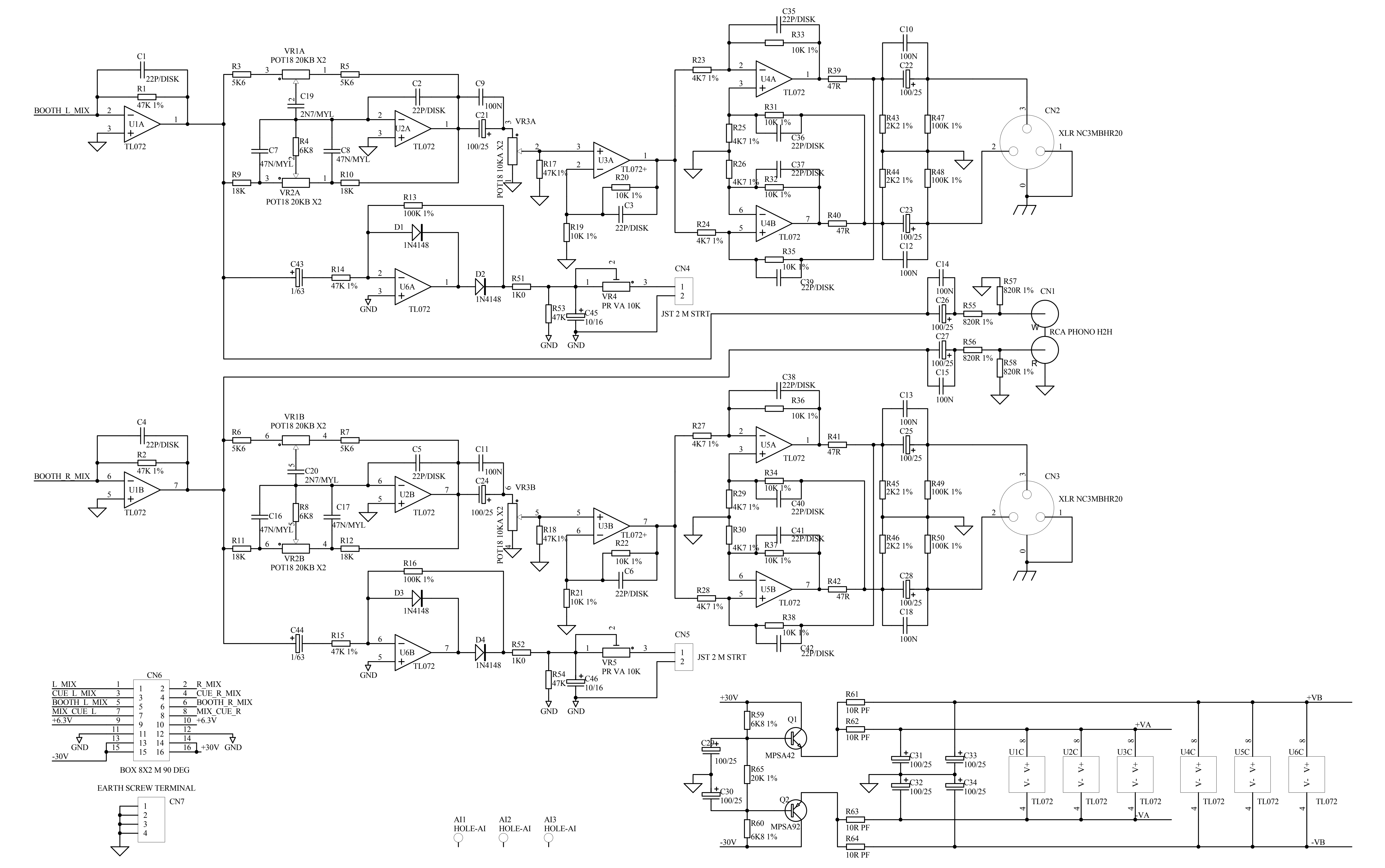
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Phantom power

30V phantom power is disabled when JP1 is fitted. This is the default factory setting. Plug the jumper on to JP2 instead if you wish to turn phantom power on.

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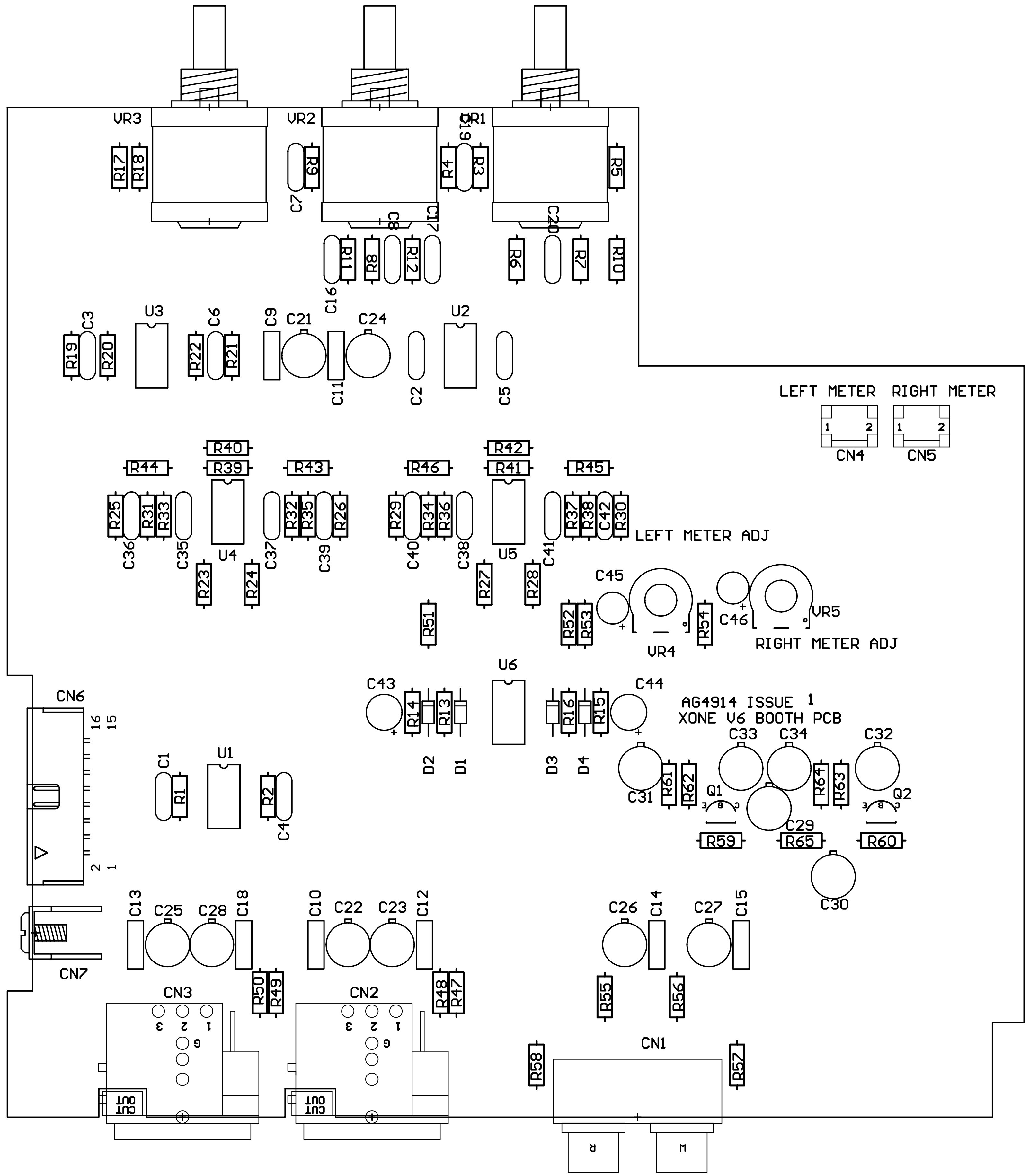
TITLE: XONE S6 BOOTH PCB

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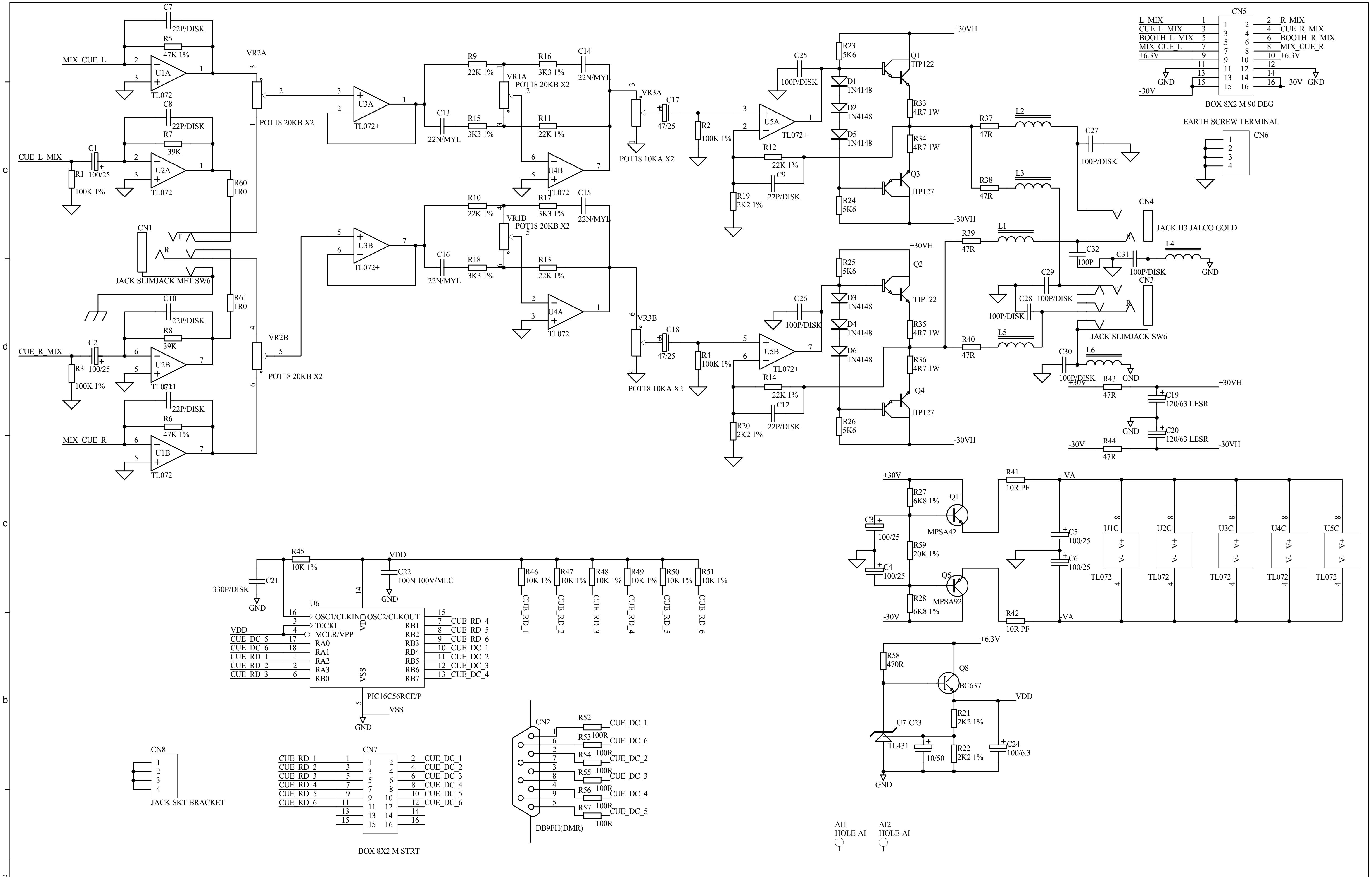
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LEFT METER
RIGHT METER
LEFT METER ADJ
RIGHT METER ADJ
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XONE V6 BOOTH PCB

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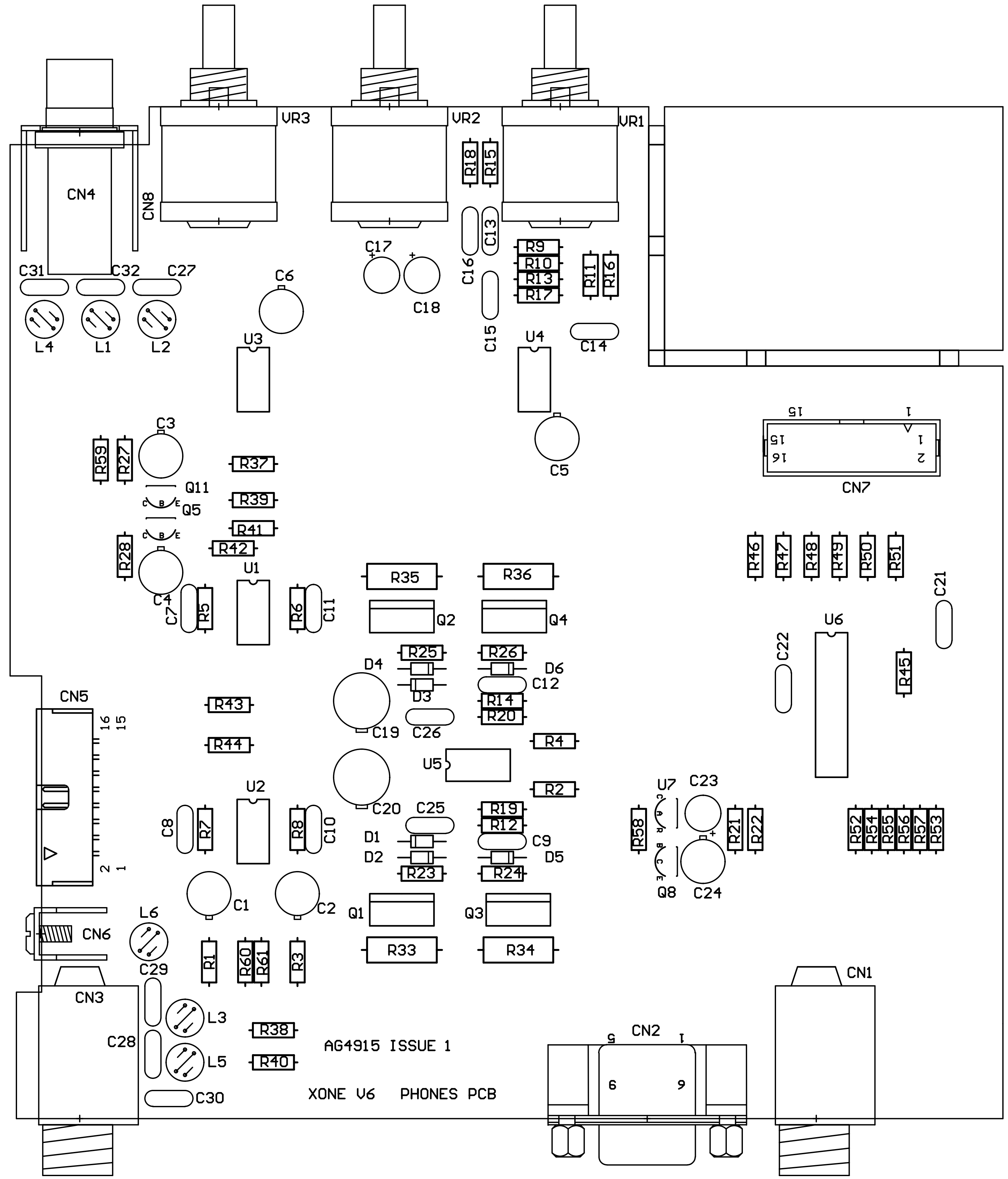
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TITLE: XONE S6 PHONES PCB

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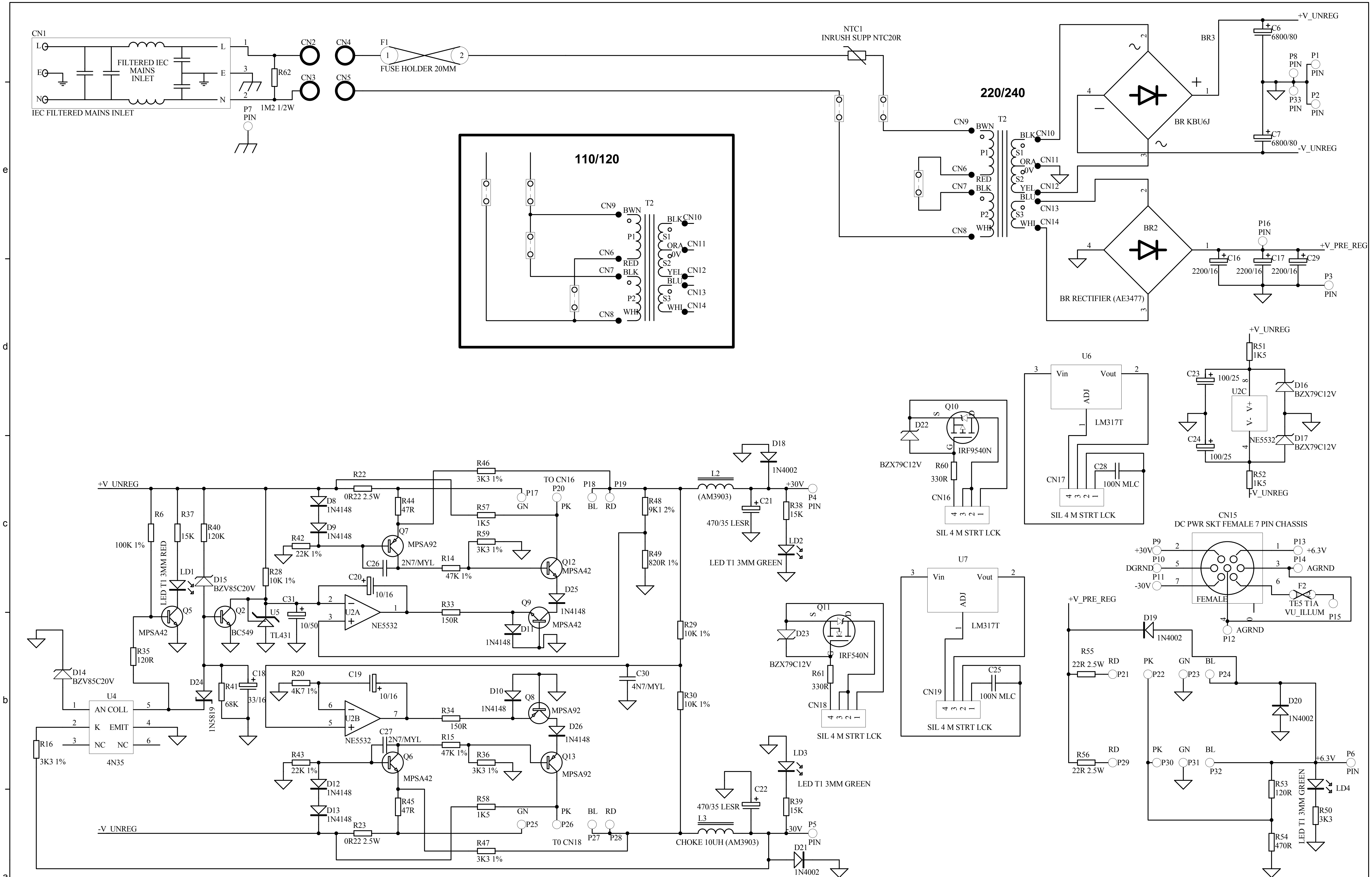
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003-054 iss.1



VR3
VR2
VR1
CN4
CN8
R18
R15
C13
C16
R9
R10
R13
R17
R11
R16
C17
C18
C6
C31
C32
C27
L4
L1
L2
U3
U4
C15
C14
C5
CN7
C3
R59
R27
R37
Q11
Q5
R39
R41
R42
R28
C4
C7
R5
U1
R6
C11
R35
R36
Q2
Q4
R46
R47
R48
R49
R50
R51
C21
C22
U6
R45
R25
R26
D6
D4
D3
C12
R14
R20
C19
C26
R43
R44
R4
U5
CN5
U2
C20
C25
R2
R19
R12
C23
U7
R58
R21
R22
R52
R54
R55
R56
R57
R53
C8
R7
R8
C10
D1
D2
C9
D5
R23
R24
Q8
C24
C1
C2
Q1
Q3
L6
CN6
R1
R60
R61
R3
R33
R34
C29
CN3
CN1
L3
R38
CN2
C28
L5
R40
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C30
XONE V6 PHONES PCB

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1	ARJ	27-05-05

FH1 FH2 FH3 FH4 FH5 FH6 FH7 FH8 FH9 FH10

NOTE

TO IMPROVE HOT START WITH ALL OPTIONS CHANGE
R44/R45 FROM 47R TO 33R
R46/R47 FROM 3K3 TO 4K7

TITLE: XONE S6 POWER SUPPLY

PAGE:

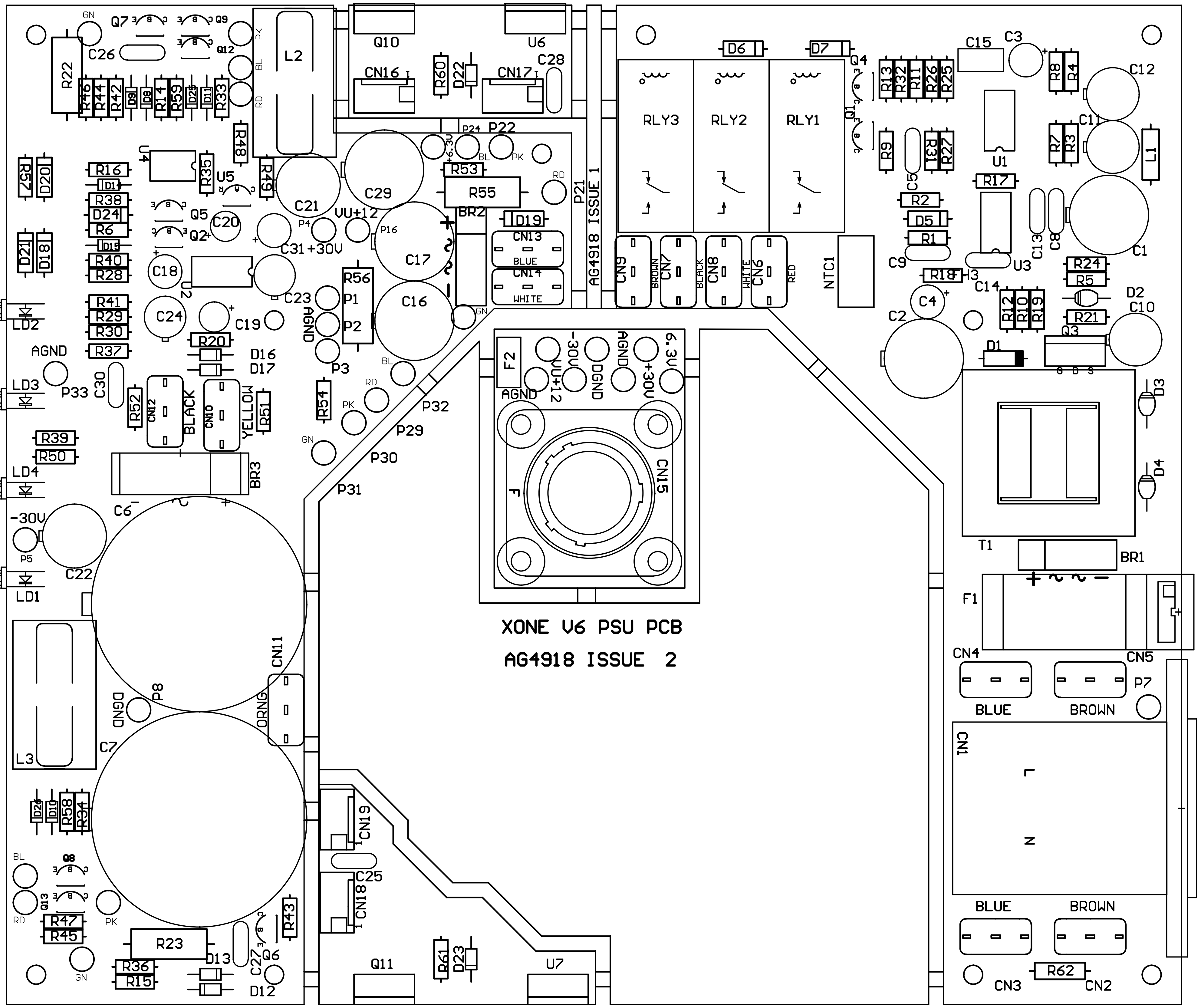
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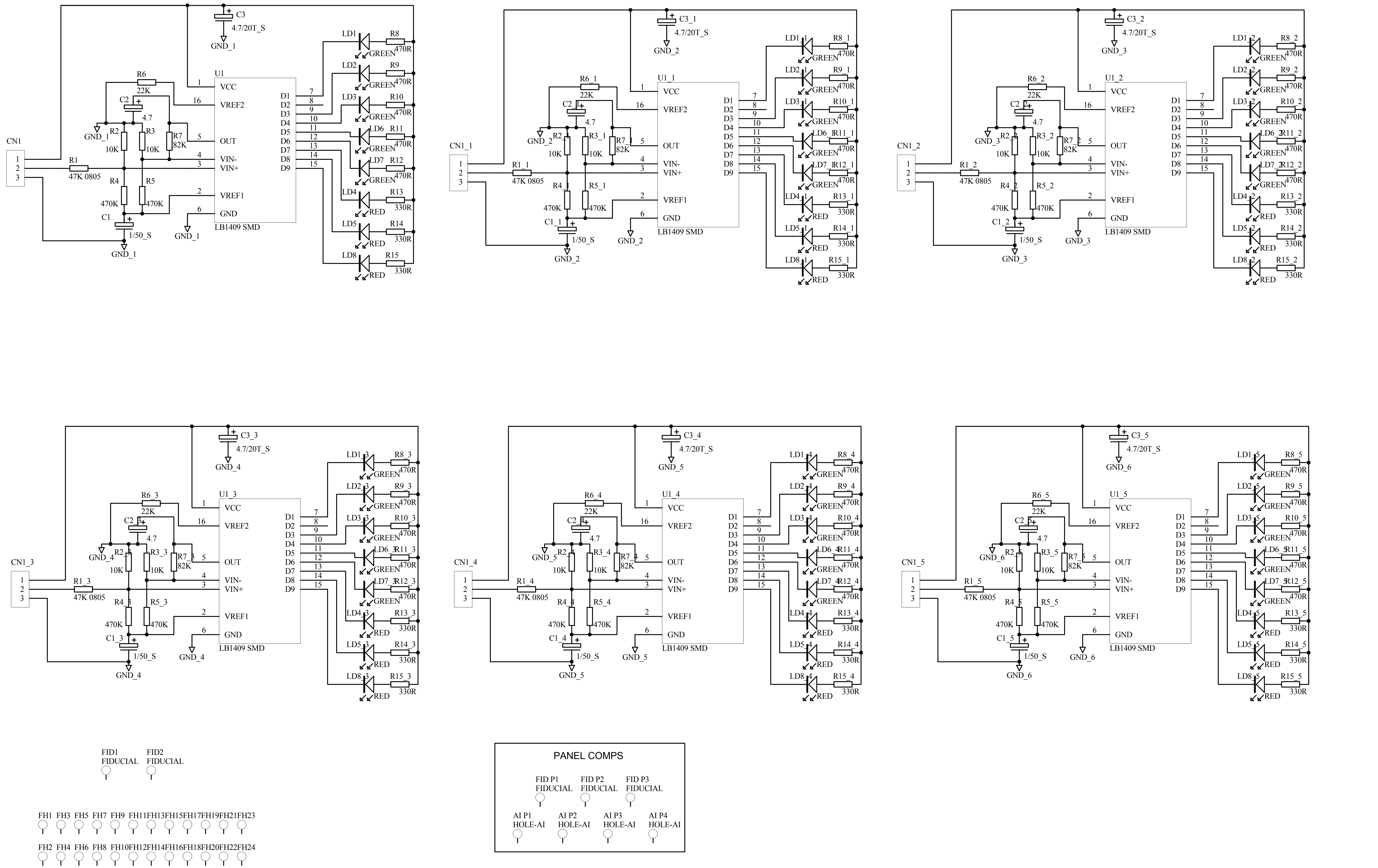
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FILE: C4916_2 S6 LED METER.Sch

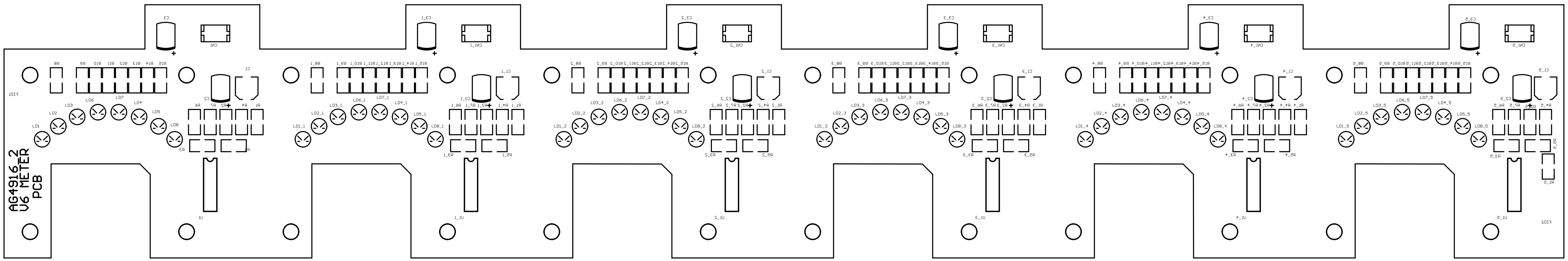
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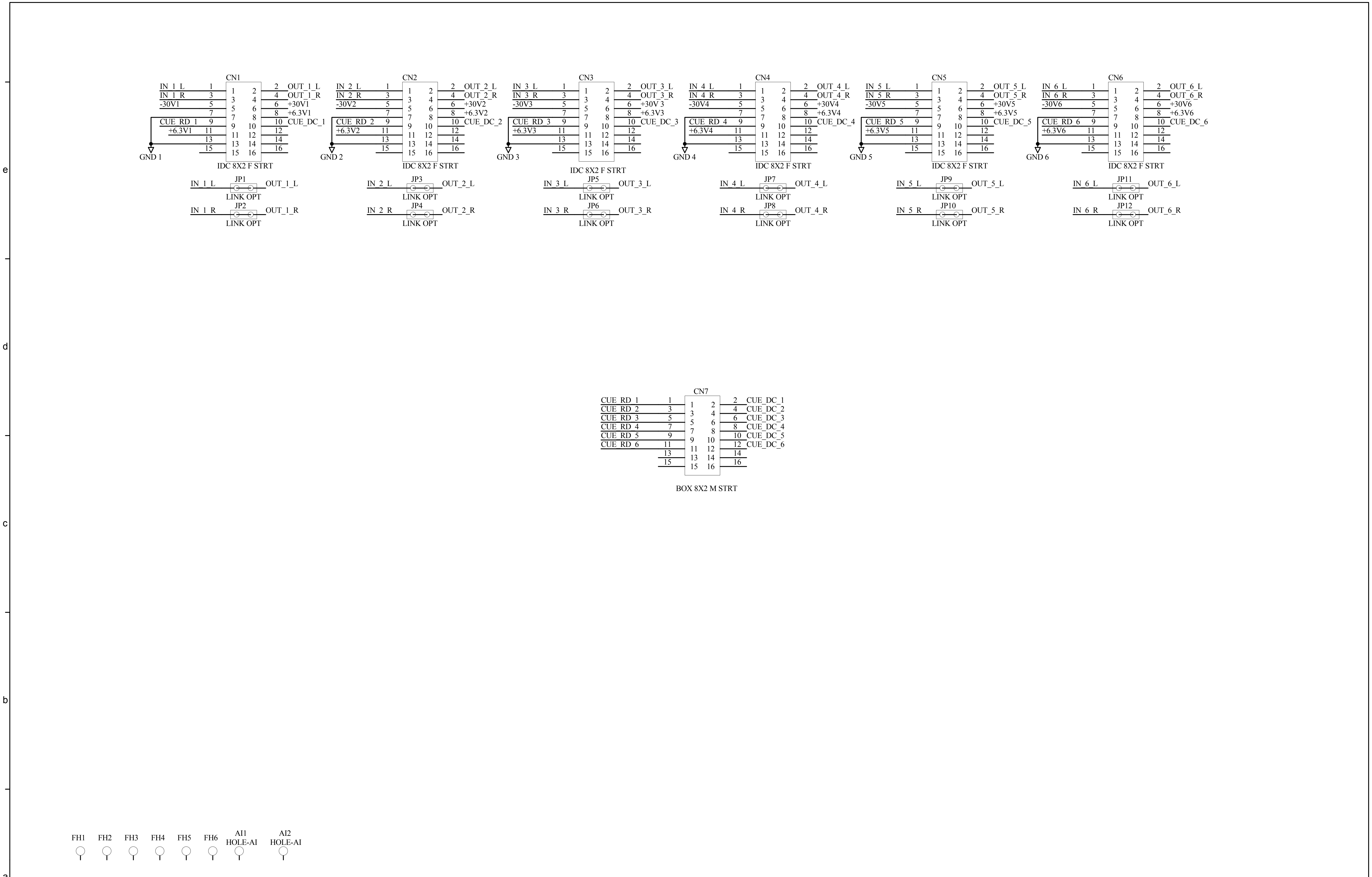
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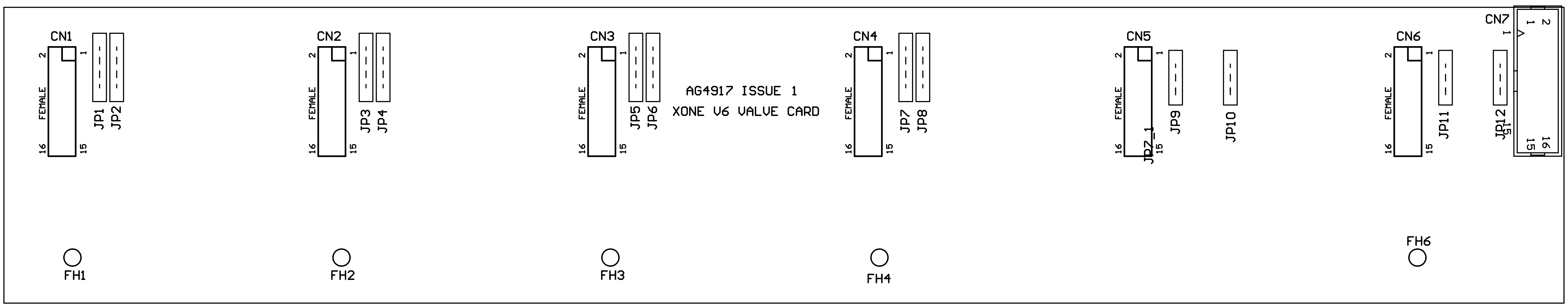
ISSUE	BY	DATE	
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TITLE: XONE S6 SLAVE PCB
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JP7
JP8
JP9
JP10
JP11
JP12
FEMALE
FH1
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FH3
FH4
FH6

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